GEAPS-Purdue Now Offering 'Grain Facilities Planning & Design II'

Registration for the next GEAPS-Purdue distance-education course, "Grain Facilities Planning and Design II," or GEAPS 511, is now open.

The five-week course, held once previously, begins April 14. It focuses on the basic principles of planning, layout, and design of commercial grain-handling facilities.

Although the course is a companion to another GEAPS-Purdue planning and design course, it was developed to stand on its own, and there is no prerequisite.

No travel is required for the ten-lecture program. Lectures are mailed to students on CDs for playback on their computers. Quizzes, reading materials, interaction with faculty members, and networking with others enrolled all occur through a dedicated course website.

The course is designed to be as convenient as possible for industry professionals and other students. Work can be done day or night, seven days a week, during the five-week period. Those successfully completing the course receive a certificate and one continuing education unit from Purdue University.

GEAPS and Purdue jointly develop and offer distance-education courses to GEAPS members and others in the grain industry.

Registration may be made through April 4 online, at www.geaps.com, or mailed to the GEAPS office (see form at right).

GEAPS 511 is being reoffered as a convenience to members and others who weren't able to participate the first time it was held—in August-September 2007. Members are entitled to a sizable registration discount.

For more information about the GEAPS-Purdue distance-education program or Facilities Planning and Design II, contact GEAPS at (952)928-4640; chouse@geaps.com.

Apply now!
April 4 Deadline

GEAPS 511: The Course of Study

Week 1

***Lesson 1* – Grain Dryers and Drying Systems**

This lecture focuses on the major objectives of grain drying and the problems that are typically associated with drying.

- Objective of grain drying
- Different drying systems and their characteristics
- Sizing dryers and determining capacity
- Dilemmas that can occur during drying
- Future dryer developmental issues

Faculty – Dr. Dirk Maier, Professor, Purdue University

***Lesson 2* – Grain Storage Systems**

The objective of this lecture is to outline the main functions of a storage system and familiarize students with the different options available.

- Functions of a storage system
- Different types of storage structures and their characteristics
- Maintenance issues
- Filling and unloading options
- Capital costs for different structures

Faculty – Steve Schmitt, TE Ibberson Co

Week 2

***Lesson 3* – Aeration and Grain Quality Management Systems**

This lecture informs students about the importance of adequate aeration and the importance of properly designing an aeration system to preserve grain quality.

- Why is aeration important
- What is considered to be adequate aeration
- Components of an aeration system
- Factors that affect airflow
- Positive versus negative aeration systems
- Fan characteristics and performance
- Closed-loop fumigation

Faculty – Ron Noyes, Oklahoma State University

***Lesson 4* – Truck and Railcar Shipping Systems**

The objective of this lecture is to outline the main functions of truck and railcar shipping system and familiarize students with the different options available.

- What are the current trends influencing truck and rail car shipping?
- How are these trends changing the design of facilities?
- What changes are being made to facilities to deal with environmental concerns?
- What safety systems need to be in-place to operate a truck or rail car loading system?
- What Automation is right for your facility?
- How much will it cost to build?

Faculty – Dave Olheiser, Van Sickle, Allen & Associates

Week 3

***Lesson 5* – Barge and Vessel Shipping Systems**

The objective of this lecture is to outline the main functions of barge and vessel shipping system and familiarize students with the different options available.

- Why is it important to follow established loading sequences for barges and ships?
- How do U.S. grain exporters compete on the world scene with countries that benefit from subsidies and state-controlled organizations?
- What are some of the risks involved with the export of grain?
- What are the methods or philosophies employed to reduce or minimize fugitive dust emissions?
- What is the purpose for shipping bins in an export elevator?

Faculty – Karl Holloway, River Consulting

***Lesson 6* – Coatings and Finishes**

Familiarize students with basics of coatings and finished used in grain facilities.

- Paint Assessment Maintenance Survey
- Coating economics
- Dealing with specifications in a coating contract
- Types of coatings
- Future of coatings in the grain industry

Faculty – Joe Davis, Tnemec Paint Co

Week 4

***Lesson 7* – Roofing**

- Differences in roofing systems
- Design considerations when designing a roofing system
- Major technological advances in the recent past

Faculty: Gregory Thirnbeck, DC Taylor Co

***Lesson 8* – Waterproofing and Rain Distribution Systems**

Familiarize students with the basics of waterproofing grain facility structures.

- Causes of concrete deterioration and breakdown of waterproof surfaces
- Concrete mix basics
- Corrosions impacts on structures
- Concrete repair
- Keys to making a good bonding surfaces

Faculty – Dennis Ahrenhuersterbaeumer, The Western Group

Week 5

***Lesson 9* – Automation and Control Systems**

This lecture covers benefits of automated systems and how to implement such a system.

- Factors driving automation
- Levels of automation and the characteristics of each
- Economics of automation

Faculty – Jim Gavrish, Compuweigh Corp

***Lesson 10* – Improving Grain Operations Planning using Elevator-SIM**

This lecture covers the potential use of computer simulation tools for the planning and evaluation of grain operations such as receiving capacity.

- Concept of modeling a grain handling operation
- Data needed to build a simulation model for a specific facility
- Examples of facility models that have been built with Elevator-SIM
- Application of Elevator-SIM models to evaluate receiving capacity improvements
- Application of Elevator-SIM models to evaluate commingling and contamination effects

Faculty – Dr. Dirk Maier, Purdue University; Justin McGill, The Andersons; Nathan Fleck, Monsanto

Distance Learning Opportunity

Grain Facilities Planning and Design II
GEAPS 511

Courses run April 14 to May 16

Requires a Windows-based computer of newer vintage—at least a Pentium III processor running Windows98 (or higher), a CD-ROM drive to play the lecture CDs, and a modem to access the course site on the internet.

Registration

Register online at members.geaps.com. Or use this form and fax to number below.

Registration fee

☐ GEAPS member: $500 ☐ Non-member: $685

The registration deadline is April 4.

Name _____

Title _____

Company _____

Mailing address _____

e-mail _____

phone _____ fax _____

Fees must be paid at the time of registration.

Payment type: ☐ Check(enclosed) ☐ Credit Card

Payment amount US $ _____

Credit payment: ☐ Am Ex ☐ MC ☐ Visa

Account No. _____ Exp. Date _____

Name on card (print) _____

Signature _____

Fax or mail your complete registration to GEAPS (details below).

Fee includes tuition and all class materials (CDs), which will be mailed to students. CDs contain course lectures.

Cancellation Policy: Before the class begins, registrant is entitled to a full refund, on condition that he returns the CDs at his own expense. Registrants who cancel up to seven days after class begins are entitled to retake the same course the next time it's offered, without charge. No refunds after the class begins. Substitutions allowed at the qualifying fee rate (member or non-member).

GEAPS
The Grain Elevator and Processing Society

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PURDUE UNIVERSITY